

Amendment and Response

Serial No.: 10/037,435

Confirmation No.: 4823

Filed: 31 December 2001

For: HYDROGEN PEROXIDE AND PERACETIC ACID INDICATORS AND METHODS

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Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. – 68. (Cancelled)

69. (New) A hydrogen peroxide sterilization indicator comprising a substrate and an indicator composition disposed thereon, wherein the indicator composition comprises:

at least one salt comprising cupric chloride;

at least one colorant that changes color when exposed to hydrogen peroxide; and

at least one binder resin;

wherein the colorant is selected from the group consisting of Alphazurine A, Azocarmine G, Victoria green S extra, Methyl violet 2B, Ethyl violet, Basic blue 41, FD/C blue 1, Toluidine blue O, Nile blue A, Quinaldine red, Basic blue 3, Acid black 24, Acid red 97, Sulforhodamine B, Chromotrope 2B, Brilliant blue R, Rhodanine 6G, Brilliant cresyl blue BB, D&C red No. 33, Acid violet 5, Plasmocorinth B, Methylene green, Methylene violet 3RAX, Reactive black 5, Basic red 15, Acid green AX986, Lissamine green B, Erioglaucine, Arsenazo 111, Azocarmine G, Victoria pure blue BO, Acid fuchsin sodium salt, D & C green No. 5, Basic red 14, and combinations thereof.

70. (New) The sterilization indicator of claim 69, wherein the indicator composition further comprises at least one colorant that does not change color when exposed to hydrogen peroxide.

71. (New) A hydrogen peroxide sterilization indicator comprising a substrate and an indicator composition disposed thereon, wherein the indicator composition comprises:

at least one salt comprising cupric sulfate;

at least one colorant that changes color when exposed to hydrogen peroxide; and

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at least one binder resin;

wherein the colorant is selected from the group consisting of Patent blue violet, Azure B, Guinea green B, Methylene violet 3RAX, Basic red 15, Fast green FCF, and combinations thereof.

72. (New) The sterilization indicator of claim 71, wherein the indicator composition further comprises at least one colorant that does not change color when exposed to hydrogen peroxide.

73. (New) A hydrogen peroxide sterilization indicator comprising a substrate and an indicator composition disposed thereon, wherein the indicator composition comprises:

at least one salt comprising cupric acetate;

at least one colorant that changes color when exposed to hydrogen peroxide; and

at least one binder resin;

wherein the colorant is selected from the group consisting of Mordant brown 48, Coomassie violet R 150, Acid blue 29, and combinations thereof.

74. (New) The sterilization indicator of claim 73, wherein the indicator composition further comprises at least one colorant that does not change color when exposed to hydrogen peroxide.

75. (New) A hydrogen peroxide sterilization indicator comprising a substrate and an indicator composition disposed thereon, wherein the indicator composition comprises:

at least one salt comprising ferrous chloride;

at least one colorant that changes color when exposed to hydrogen peroxide; and

at least one binder resin;

wherein the colorant is selected from the group consisting of Alphazurine A, Azocarmine G, Victoria green S extra, Methyl violet 2B, Ethyl violet, Alizarin violet 3R, Basic blue 41, FD/C blue 1, Toluidine blue O, Nile blue A, Quinaldine red, Basic blue 3, Acid black 24, Acid red 97,

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Cibacron brilliant red 3B, Sulforhodamine B, Direct blue 71, Chromotrope 2B, Brilliant blue R, Amaranth, Rhodanine 6G, Brilliant cresyl blue BB, D&C red No. 33, Direct red 75, Acid violet 7, Acid violet 5, Plasmocorinth B, Brilliant crocein MOO, Methylene green, Methylene violet 3RAX, Ponceau SS, Reactive black 5, Basic red 15, Acid green AX986, Lissamine green B, Erioglaucine, Violamine R, Brilliant Black BN, Arsenazo 111, Azocarmine G, Victoria pure blue BO, Acid fuchsin sodium salt, D & C green No. 5, Basic red 14, and combinations thereof.

76. (New) The sterilization indicator of claim 75, wherein the indicator composition further comprises at least one colorant that does not change color when exposed to hydrogen peroxide.

77. (New) A hydrogen peroxide sterilization indicator comprising a substrate and an indicator composition disposed thereon, wherein the indicator composition comprises:

- at least one salt comprising ferrous sulfate;

- at least one colorant that changes color when exposed to hydrogen peroxide; and

- at least one binder resin;

wherein the colorant is selected from the group consisting of Patent blue violet, Eriochrome black T, Eriochrome blue black B, Acid blue 113, Acid red 151, Alkali blue 4B, and combinations thereof.

78. (New) The sterilization indicator of claim 77, wherein the indicator composition further comprises at least one colorant that does not change color when exposed to hydrogen peroxide.

79. (New) A hydrogen peroxide sterilization indicator comprising a substrate and an indicator composition disposed thereon, wherein the indicator composition comprises:

- at least one salt comprising cobalt chloride;

- at least one colorant that changes color when exposed to hydrogen peroxide; and

- at least one binder resin;

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wherein the colorant is selected from the group consisting of Patent blue violet, Aniline blue, Congo red, Arsenazo 1, Acid blue 92, Acid blue 29, and combinations thereof.

80. (New) The sterilization indicator of claim 79, wherein the indicator composition further comprises at least one colorant that does not change color when exposed to hydrogen peroxide.

81. (New) A hydrogen peroxide sterilization indicator comprising a substrate and an indicator composition disposed thereon, wherein the indicator composition comprises:

at least one salt comprising cobalt acetate;

at least one colorant that changes color when exposed to hydrogen peroxide; and

at least one binder resin;

wherein the colorant is selected from the group consisting of Nile blue A, Eriochrome blue black B, D&C green No. 5, Basic red 15, Erioglaurine, Reactive blue 2, and combinations thereof.

82. (New) The sterilization indicator of claim 81, wherein the indicator composition further comprises at least one colorant that does not change color when exposed to hydrogen peroxide.

83. (New) A hydrogen peroxide sterilization indicator comprising a substrate and an indicator composition disposed thereon, wherein the indicator composition comprises:

at least one salt comprising chromium potassium sulfate;

at least one colorant that changes color when exposed to hydrogen peroxide; and

at least one binder resin;

wherein the colorant is selected from the group consisting of Ethyl violet, Quinaldine red, Eriochrome black T, Eriochrome blue black B, Congo red, Acid blue 113, and combinations thereof.

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84. (New) The sterilization indicator of claim 83, wherein the indicator composition further comprises at least one colorant that does not change color when exposed to hydrogen peroxide.

85. (New) A method of monitoring a hydrogen peroxide sterilization process, the method comprising:

- providing a hydrogen peroxide indicator comprising a substrate and the indicator composition of claim 69;
- providing an article to be sterilized; and
- exposing the hydrogen peroxide indicator and the article to be sterilized to hydrogen peroxide vapor.

86. (New) A method of monitoring a hydrogen peroxide sterilization process, the method comprising:

- providing a hydrogen peroxide indicator comprising a substrate and the indicator composition of claim 71;
- providing an article to be sterilized; and
- exposing the hydrogen peroxide indicator and the article to be sterilized to hydrogen peroxide vapor.

87. (New) A method of monitoring a hydrogen peroxide sterilization process, the method comprising:

- providing a hydrogen peroxide indicator comprising a substrate and the indicator composition of claim 73;
- providing an article to be sterilized; and
- exposing the hydrogen peroxide indicator and the article to be sterilized to hydrogen peroxide vapor.

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88. (New) A method of monitoring a hydrogen peroxide sterilization process, the method comprising:

- providing a hydrogen peroxide indicator comprising a substrate and the indicator composition of claim 75;
- providing an article to be sterilized; and
- exposing the hydrogen peroxide indicator and the article to be sterilized to hydrogen peroxide vapor.

89. (New) A method of monitoring a hydrogen peroxide sterilization process, the method comprising:

- providing a hydrogen peroxide indicator comprising a substrate and the indicator composition of claim 77;
- providing an article to be sterilized; and
- exposing the hydrogen peroxide indicator and the article to be sterilized to hydrogen peroxide vapor.

90. (New) A method of monitoring a hydrogen peroxide sterilization process, the method comprising:

- providing a hydrogen peroxide indicator comprising a substrate and the indicator composition of claim 79;
- providing an article to be sterilized; and
- exposing the hydrogen peroxide indicator and the article to be sterilized to hydrogen peroxide vapor.

91. (New) A method of monitoring a hydrogen peroxide sterilization process, the method comprising:

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providing a hydrogen peroxide indicator comprising a substrate and the indicator composition of claim 81;

providing an article to be sterilized; and

exposing the hydrogen peroxide indicator and the article to be sterilized to hydrogen peroxide vapor.

92. (New) A method of monitoring a hydrogen peroxide sterilization process, the method comprising:

providing a hydrogen peroxide indicator comprising a substrate and the indicator composition of claim 83;

providing an article to be sterilized; and

exposing the hydrogen peroxide indicator and the article to be sterilized to hydrogen peroxide vapor.